



# FORWARD PROGRESS

2019 CORPORATE SUSTAINABILITY REPORT

## A MESSAGE FROM OUR CEO

# FOCUSED ON ISSUES THAT MATTER

## TO OUR BUSINESS AND OUR STAKEHOLDERS

CONSOL Energy is time tested. Together with our former parent, we have been producing and marketing the coal that has powered economic progress and growth in the U.S. and around the world for over 150 years. The Company's endurance throughout economic cycles is not only a differentiating factor in the coal industry, but also a testament to the Company's legacy of responsible business practices and our team's dedication to safety, compliance, and continuous improvement. While "ESG" or Environmental, Social, and Governance considerations have recently evolved as a business designation, at CONSOL, ESG has historically been integrated into our long-standing commitment to be the safest, most responsible coal operator in the world.

"Sustainability" and "coal" cannot be uncoupled, as the societal benefits of coal are far reaching. Between 2012 and 2017, more than 370 million people worldwide gained access to electricity—an improvement that was primarily driven by coal. Yet, more than 950 million people still lack access to electricity.

The global coal-fueled generating capacity has surpassed 2000 gigawatts, with an additional 155 gigawatts under construction.<sup>2,3</sup> Although coal's global percentage of electricity generation is projected to decrease over time, coal will remain a vital component for developing economies—even when considering the International Energy Agency's (IEA) Sustainable Development Scenario (SDS).<sup>4</sup> As the energy mix evolves, the need for "sustainable" coal operators will become more critical than ever.

To that end, in the two years since becoming an independent company, CONSOL Energy has focused on driving long term value through technology, innovation, and sound resource allocation. Accordingly, we've outlined sustainability goals that enhance employee safety, reduce environmental impacts, benefit stakeholders, and increase operational efficiencies. Ultimately, we believe that steadfast execution of our strategy and performance against these goals will position the Company to supply the energy needed to power society into the future.

Despite volatile market conditions, 2019 was a year of Forward Progress at CONSOL Energy. We achieved sustainability targets such as:

- **Employee safety incident rate 31% lower than the national average**
- **Environmental compliance record exceeding 99.9% for the 6th consecutive year**
- **Expansion of water recycling program to reduce surface water withdrawals by 42%, since 2016.**

In addition, we launched opportunistic growth initiatives such as our Itmann Project, expanded our technology endeavors and continued to delever our balance sheet. While we are proud of our performance to date, we strive to continuously evolve and differentiate CONSOL throughout the coal lifecycle.

I invite you to learn more in our 2019 Sustainability Report.



**Jimmy A. Brock**  
President and Chief Executive Officer

**JIMMY A. BROCK**  
President and Chief  
Executive Officer

*"Our approach to corporate sustainability focuses first-and-foremost around the safety of our workforce."*

(1) IEA (2018), World Energy Outlook 2018, OECD/IEA, Paris, Figures 2-7, 7-11

(2) IEA (2018), World Energy Outlook 2018, OECD/IEA, Paris, pg. 528

(3) IEA (2018), World Energy Outlook 2018, OECD/IEA, Paris, Figure 7-12

(4) IEA (2018), World Energy Outlook 2018, OECD/IEA, Paris, pg. 91






## SEEKING SUSTAINABILITY THROUGH THE

# LIFECYCLE OF COAL

Since our November 2017 spin-off to become an independent, stand-alone publicly traded coal company, CONSOL Energy has sought to lead the coal industry in sustainability. To date, CONSOL has begun or implemented innovative and industry-leading projects seeking to incorporate sustainability throughout the entire coal lifecycle: (1) Planning and Management; (2) Extraction; (3) Processing; (4) Transportation; and (5) Utilization.

CONSOL's sustainability is supported by our Company's culture of safety, compliance, and continuous improvement. Our unique approach ranges from deploying innovative projects to improve operational efficiencies during mining, to exploiting the lower carbon intensity of our coal and examining diversified end uses of coal at the end of the lifecycle. We believe that our sustainability efforts strengthen our future and differentiates CONSOL from other domestic and international coal companies. In this sustainability report, our second as an independent

Company, we focus on environmental, social and governance (ESG) issues of greatest impact to our business and of greatest concern to our stakeholders. Our related sustainability goals,  and the **Forward Progress** we've made toward achieving these goals, are highlighted throughout this report. Unless otherwise noted, the data presented in this report covers the Company in its entirety, for the period January 1 through December 31, 2018.





# ABOUT CONSOL ENERGY

Headquartered in Canonsburg, Pennsylvania, CONSOL is an independent U.S. based coal company focused on safely and compliantly producing and selling high-quality bituminous coal from the Northern Appalachian Basin. The Company's assets include the Pennsylvania Mining Complex ("PAMC"), the CONSOL Marine Terminal in the Port of Baltimore ("CMT"), undeveloped coal reserves located in the Northern Appalachian ("NAPP"), Central Appalachian ("CAPP") and Illinois ("IL") basins, as well as certain related coal assets and reclamation and water treatment obligations. In addition, CONSOL Energy retains a 61.7% ownership interest in CONSOL Coal Resources ("CCR"), an income oriented master limited partnership.

## "CEIX"

NYSE Publicly Traded

## 698.5MM

Tons of High Quality,  
Pittsburgh Seam  
Reserves at PAMC

## 1.6B

Tons of Greenfield  
Reserves in the NAPP,  
CAPP, and IL Basins

## 27.6MM

Tons—Record Production  
at PAMC in 2018

## 1,772

Employees

## >\$400MM

in Direct Economic  
Contribution in 2018

### MATERIAL IMPACTS OF GREATEST STAKEHOLDER CONCERN

- Employee Health and Safety
- Environmental Compliance
- Air Quality
- Water Management
- Waste Management
- Ethical Business Practices
- Economic Contribution

1

SUSTAINABILITY IN THE COAL LIFECYCLE:

# PLANNING

## SUSTAINABLE OPERATIONS BASED ON A FOUNDATION OF ETHICAL BUSINESS PRACTICES

The Board of Directors and management team firmly believe that sound principles of corporate governance are essential in making good decisions on behalf of our shareholders, employees, and other stakeholders. Furthermore, corporate governance goes hand in hand with strong financial performance. Our governance program sets a “Tone at the Top,” starting with the Board of Directors and the executive management team. This is necessary to establish a strong cultural expectation of safety and compliance that flows throughout the entirety of CONSOL’s organizational structure.



Read more at [consolenergy.com/  
about/governance](https://consolenergy.com/about/governance)





## OPERATING WITH ETHICS AND INTEGRITY

The Company is governed by a Board of Directors of six members, who are divided into three classes with staggered terms, and all of whom are independent under the New York Stock Exchange rules other than Mr. Brock, our President and Chief Executive Officer. In addition, the Audit, Compensation, and Nominating and Corporate Governance Committees consist exclusively of independent directors. CONSOL's 2019 Board of Directors include the following individuals:

| Name                      | Age | Director Since | Occupation  | Class/Team Expiring | Independent | Current Committee Memberships  |
|---------------------------|-----|----------------|---|---------------------|-------------|--|
| <b>William P. Powell†</b> | 63  | 2017           | Managing Partner of 535 Partners LLC                              | Class III 2020      | Yes         | <ul style="list-style-type: none"> <li>• AC</li> <li>• CC</li> <li>• HSE</li> </ul>  |
| <b>Sophie Bergeron</b>    | 42  | 2019           | Mine General Manager, Eleonore Mine of Newmont Goldcorp, Inc.     | Class I 2021        | Yes         | <ul style="list-style-type: none"> <li>• NCG</li> <li>• HSE</li> </ul>               |
| <b>James A. Brock</b>     | 63  | 2017           | President and Chief Executive Officer of CONSOL Energy Inc.       | Class I 2021        | No          | <ul style="list-style-type: none"> <li>• HSE</li> </ul>                              |
| <b>John T. Mills</b>      | 72  | 2017           | Former Chief Financial Officer of Marathon Oil Corporation        | Class III 2020      | Yes         | <ul style="list-style-type: none"> <li>• AC</li> <li>• CC</li> <li>• HSE</li> </ul>  |
| <b>Joseph P. Platt</b>    | 72  | 2017           | General Partner of Thorn Partners LP                              | Class II 2022       | Yes         | <ul style="list-style-type: none"> <li>• CC</li> <li>• NCG</li> <li>• HSE</li> </ul> |
| <b>Edwin S. Roberson</b>  | 74  | 2017           | Former Chief Executive Office of Christ Community Health Services | Class II 2022       | Yes         | <ul style="list-style-type: none"> <li>• AC</li> <li>• NCG</li> <li>• HSE</li> </ul> |



William Powell, one of our independent directors, serves as the Chair of our Board. By selecting an independent director as the Chair of the Board, our Board's leadership structure fosters clear accountability and enhances the Company's ability to communicate a clear, consistent message and strategy to stockholders, employees, customers and suppliers.

### Diversity on Board:

We believe in diversity and value the benefits diversity can bring to our Board. In 2018, our Board adopted a policy regarding diversity of its members. Effective March 1, 2019, Sophie Bergeron was elected as a Class I director to fill the vacancy resulting from a retiring director.



To learn more about our Board of Directors, please see our **Proxy Statement** for the May 2019 annual meeting.

## Compliance Program, Codes of Conduct and Avoiding Conflicts of Interest:

CONSOL maintains a formal Compliance Program which codifies our Core Values and certain policies and procedures related to compliance measures. The Compliance Program incorporates industry best practices with respect to the receipt and provision of gifts and entertainment, along with a statement of methodology when CONSOL uses non-GAAP financial measures.

Foundational components of the Compliance Program are the [Code of Employee Business Conduct and Ethics](#) and [Code of Director Business Conduct](#). The essence of our codes of conduct are that CONSOL's directors and employees will conduct our business with integrity, in compliance with applicable laws, and in a manner that excludes considerations of personal advantage. Each code addresses topics relating to encouraging ethical behavior. These include: avoiding conflicts of interest, placing restrictions upon the receipt of gifts and the making of payments, protecting CONSOL's assets and complying with laws. Each year the Board assesses the adequacy of our codes and approves additions or revisions as necessary to keep our codes current with applicable laws.

- ***Critical concerns can be communicated to the Board, through written communication directed to the Corporate Secretary at 1000 CONSOL Energy Drive, Suite 100, Canonsburg, PA 15317, or by sending an email to [directors@consolenergy.com](mailto:directors@consolenergy.com).***

## Emphasis on Ethics Compliance:

CONSOL utilizes the services of an independent third party to facilitate anonymous reporting of any concerns surrounding the Company—whether it be business, financial, employment, or operational in nature. The CONSOL Ethics and Compliance Hotline number is included within the Employee Code of Conduct, strategically posted at all company locations, and available on our [website](#).

We believe that regular training on our Code of Employee Business Conduct and Ethics and the CONSOL Ethics and Compliance Hotline increases awareness, supports our culture, and drives our compliance performance. As a result, effective January 1, 2019, we updated the Code to include more specificity about the hotline, implemented a training program in which 100% of our salaried workforce participated, and emphasized the importance of Code compliance and the hotline availability in our annual letter to vendors. It is our policy to comply with all applicable laws and adhere to the highest level of ethical conduct, including anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act (the FCPA) and similar laws in other jurisdictions. In that regard, in 2018 we adopted an updated Foreign Corrupt Practices Act Policy. Employees, directors, and officers to whom the policy applies participated are required to certify compliance with the FCPA and our policy. It is important that all our business activities reflect our commitment to the highest standards of integrity and accountability.

- ***To anonymously report any violations of the Code of Employee Business Conduct and Ethics, suspected illegal or unethical behavior, or other complaints or grievances related to the Company, please call the confidential Ethics and Compliance Hotline at 1-800-544-8024.***



**CONSOL's Board regularly reviews our governance policies to ensure that we comply with applicable laws and regulations, as well as best practices. In 2019, CONSOL revised its Code of Employee Business Conduct and Ethics while revising its Corporate Governance Guidelines in December 2018. For more information, please see:**

- [Corporate Governance Guidelines](#)
- [Code of Employee Business Conduct and Ethics](#)
- [Related Person Transaction Policy and Procedure](#)
- [Charter of Compensation Committee of the Board of Directors](#)
- [Charter of Health, Safety, and Environmental Committee of the Board of Directors](#)
- [Charter of Nominating and Corporate Governance Committee of the Board of Directors](#)
- [Charter of Audit Committee of the Board of Directors](#)

## SUSTAINABILITY RISK MANAGEMENT APPROACH

CONSOL's Board of Directors are responsible for oversight of the Company's policies, programs and strategies regarding significant corporate sustainability issues, including matters related to environmental, social, and governance concerns. The Board periodically (but no less than annually) receives sustainability updates from management and its committees, and reviews these policies, programs, and strategies, providing guidance to management with respect to such matters.

- ◎ **CONSOL strives to achieve operational transparency in publishing annual corporate sustainability reports, which are prepared by CONSOL representatives and reviewed and approved by the Health, Safety, and Environment Committee and the Board of Directors.**

As further demonstration of our dedication to transparency, we continue to participate in [CDP](#), a not-for-profit global environmental impact disclosure system. Through CDP, we disclose our ESG management approach as it relates to climate and water topics on an annual basis.

### Formation of ESG Committee:

In 2018, CONSOL formed an ESG Committee consisting of employees representing various departments within the company. The Committee includes employees from operations, finance, investor relations, land resources, human resources, legal, marketing, external affairs, and environmental & regulatory affairs. The Committee oversees and provides input to management on the Company's policies, strategies and projects related to sustainability matters. Since its formation, the ESG Committee engaged various stakeholders to discuss ESG issues, trends, and strategies. This engagement ranged from community leaders to investment banks to elected officials. The ESG Committee seeks to continue this engagement to foster long-term relationships that will shape and guide CONSOL's commitment to sustainability.



- ▷ **RESPECTING HUMAN RIGHTS:** CONSOL recently adopted a human rights policy at the recommendation of the ESG Committee. This policy reinforces our commitment and responsibility to respect all human rights, including those of our employees, suppliers, vendors, subcontractors and other partners, and individuals in communities in which we operate. Our policy addresses promoting health and safety, eliminating compulsory labor and human trafficking, abolishing child labor, eliminating harassment and unlawful discrimination in the workplace and providing competitive compensation. In support of our commitment, we have incorporated this policy into our annual training required by all salaried employees.

### Enterprise Risk Management:

While the Board of Directors is responsible for assessing major risks facing the Company, and reviewing associated options for risk mitigation, management is responsible for identifying, communicating, and discussing the risks affecting the Company, its subsidiaries, and our business. To that end, we created a specific role to oversee risk management for the Company. Given the critical nature of this position, we assigned an experienced former CONSOL mine superintendent as our General Manager of Enterprise Risk Management and Fire Prevention. In 2018, we performed a comprehensive analysis of material risks that could affect CONSOL and communicated those results to the Board. Furthermore, we regularly update and communicate those material operational, financial, and regulatory risks, including those related to sustainability and the environment, in our financial disclosures. For more information, please see the "Risk Factors" section of our [Annual Report on Form 10-K](#), for the fiscal year ended December 31, 2019.

## PUBLIC POLICY

Public policy decisions at the local, state, and federal levels can affect the long-term success of CONSOL and its subsidiaries. CONSOL believes that we have a responsibility to participate in the public policy process to protect and enhance the Company's interests and create value for our stockholders. One way we contribute to public policy development is through membership in trade organizations. In 2018, CONSOL was an active participant in the National Mining Association, the Pennsylvania Chamber of Business and Industry, the Pennsylvania Coal Alliance, the West Virginia Coal Association, the National Coal Council, the American Coal Council, and the American Coalition for Clean Coal Electricity (now known as America's Power).

**CONSOL was also represented on the Committee on Earth Resources ("CER") of the National Academies of Science, Engineering, and Medicine. The CER provides a unique forum for discussion and exchange of information among scientists, engineers, and policy makers about issues relevant to the supply, delivery, and associated impacts of mineral and energy resources.**

Another way we participate in the political process is through political contributions. CONSOL sponsors a federal PAC that is funded solely by voluntary contributions from our employees and the Board. "CONSOL Energy Inc. PAC" is a federally-registered PAC that may make contributions in accordance with applicable federal, state, and local regulations. Detailed information on the PAC's political contributions at both the federal and state level is publicly disclosed in regular reports to the Federal Election Commission and may be accessed at [www.fec.gov](http://www.fec.gov).

Separately, the Company may make corporate political contributions where permitted by law and supportive of and consistent with CONSOL's business strategy. CONSOL Energy and its subsidiaries may use corporate funds to contribute to state or local candidates and committees, entities organized pursuant to Section 527 of the Internal Revenue Code, and to other federal political committees where permitted. Contributions from corporations to federal candidate committees and certain other federal political committees are prohibited by law. In certain states, CONSOL Energy and its subsidiaries are permitted to make corporate political contributions to state-level candidates or committees, in compliance with state contribution limits and registration/reporting requirements, where applicable.



## PERFORMING AGAINST OUR SUSTAINABLE FINANCIAL PRIORITIES

After completing the separation from our former Parent in the fourth quarter of 2017, **we outlined specific, sustainable financial priorities:**

**(1) maintain a healthy balance sheet, (2) grow opportunistically, and (3) create shareholder value. We continue to execute against this financial strategy, and in 2018, we realized Forward Progress with a net income of \$153 Million to CONSOL's stockholders.** We

also achieved de-leveraging of 0.7 times and repaid/purchased 22% of the debt issued upon listing as a publicly traded company. This strong execution is supported by PAMC's diversified marketing strategy, in which we maximize our sales to an established base of top-performing, environmentally-controlled domestic customers, while strategically maximizing shipments to thermal and metallurgical end-users in the export market by way of the CONSOL Marine Terminal.

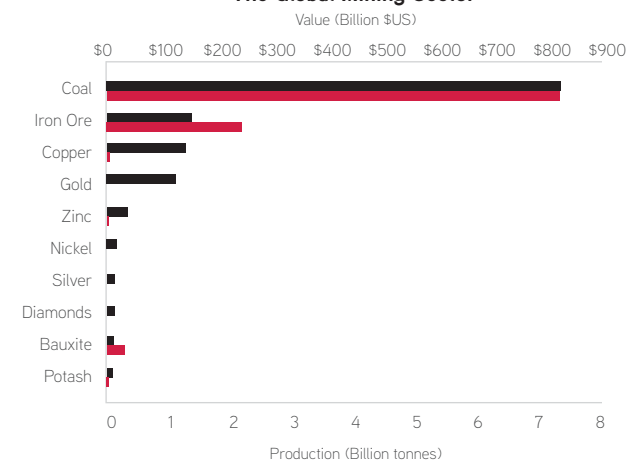
Our performance is also a result of the Company's disciplined capital allocation process, in which we allocate capital to the highest rate of return areas. Our previously announced Itmann project is our first major organic, opportunistic and accretive growth project since becoming a stand-alone Company. The Itmann #5 mine is a low-vol, metallurgical coal mine located in Wyoming County, West Virginia with an estimated production exceeding 900,000 tons per year at full capacity. We believe that the Itmann project aligns with our skill set and provides diversification, while providing us with the flexibility to adjust to variable market conditions.

Our strong financial performance allows us to continually invest in safety and compliance projects that support our core values and in turn, our exceptional performance records. In 2018, our environmental and compliance expense totaled \$47.4 million, and included expenses related to permitting, water treatment, stream monitoring and mitigation, reclamation, land mitigation, abandoned gas well plugging, and road repairs. In addition, we invested over \$1.6 million in safety related capital expenditures throughout the year. These safety related expenditures included the deployment of personal proximity detection systems on our mining equipment.

Equally important is the direct and indirect financial support we provide to the local economy—the communities where we operate, and our employees reside. This benefit extends to our service providers and business partners, whose employees live and work in the CONSOL operational areas of Pennsylvania, West Virginia, and Maryland. In 2018, our direct economic contribution of \$401 million stemmed from employee wages, employee benefits, property taxes, income taxes, sales tax, and other taxes associated with production activities and paid to federal, state, and local governments. The Company's total economic impact, including operating and capital expenditures, is approximately \$1 billion annually.

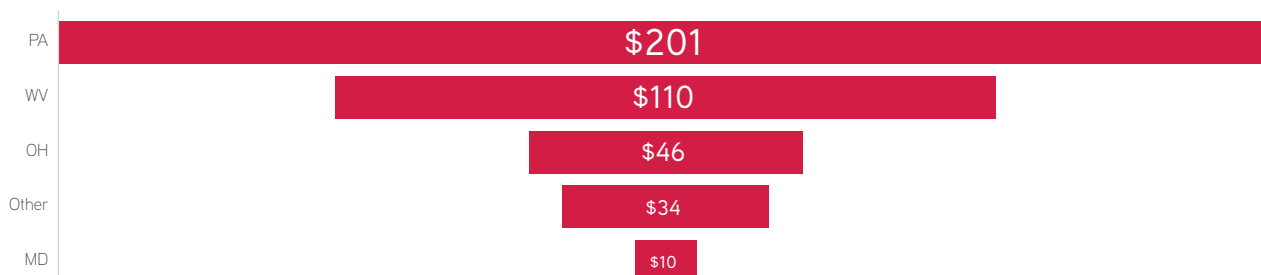
On a global scale, coal's contribution to the global economy cannot be excluded from conversations surrounding the sustainability of the coal lifecycle. The coal industry's financial impact dominates the global mining industry, adding market value of approximately \$800 billion with production exceeding 7 billion tons annually.<sup>1</sup>

### The Global Mining Sector



(1) S&P Global Market Intelligence (2017)

### CONSOL Energy—2018 Direct Economic Contribution by Jurisdiction (\$MM)



\*other\* includes US Federal, Canada (Federal and Alberta), CO, DE, IL, IN, KY, MI, MD, NY, TN, UT

**\$50M**

**in Safety, Environmental and Compliance Expense**

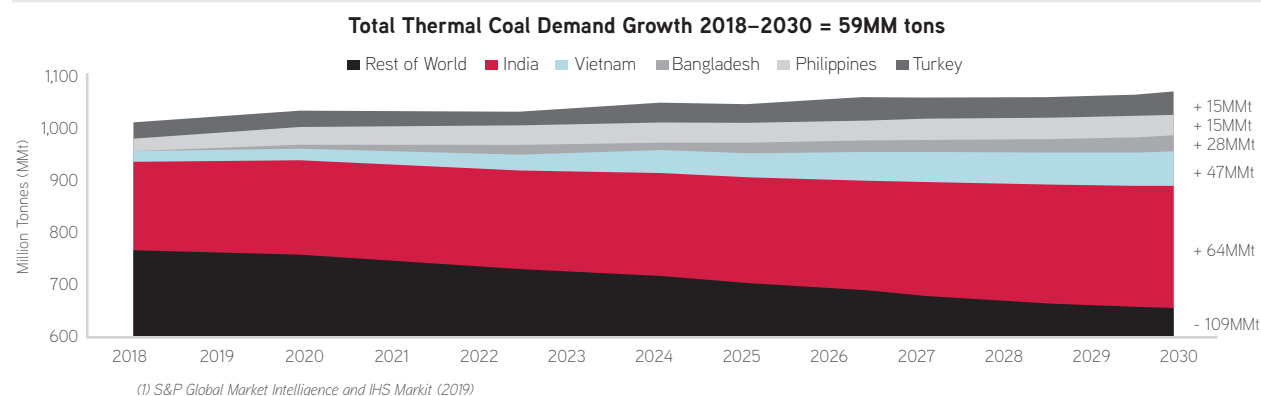
**~\$1B**

**Total economic impact**

**\$153M**

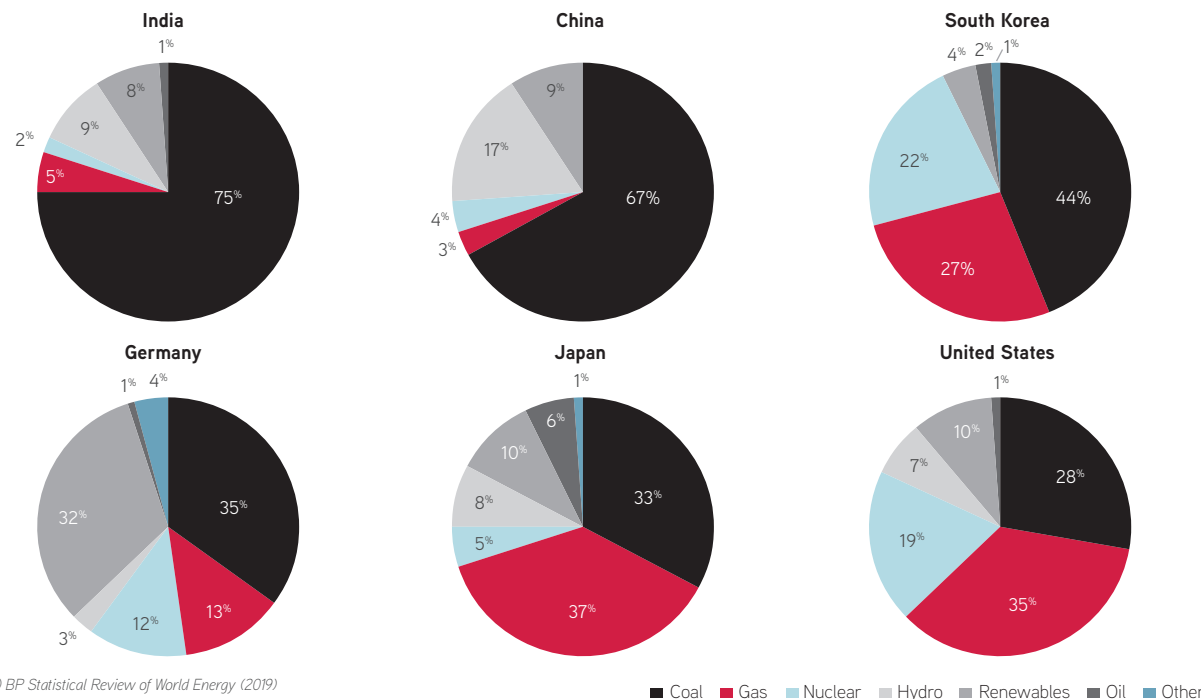
**Net income**

Furthermore, major economies continue to rely on coal to provide their baseload electricity generation and thermal coal demand is expected to grow, primarily in Asia.<sup>1</sup> We believe this shift in demand creates opportunities for CONSOL, as a responsible operator focused on producing our low cost, superior quality PAMC coal. Our location in the Northern Appalachian Basin provides better coal pricing dynamics and access to export seaborne markets, while limiting our exposure to potential supply disruptions such as those experienced after substantial flooding in the mid-west in 2018.



While U.S. coal power plant capacity decreased by 10.8% between 2015 and 2018, PAMC annual sales increased by 13.6% during the same period, as a result of these macroeconomic factors.<sup>3</sup> We seek to continually build upon these differentiating factors. As conditions evolve, those operators who exemplify sustainability and discipline in their financial policies—such as through working within cash flow, paying down debt, and returning value to shareholders—will be able to support demand on a global scale into the foreseeable future.

### Major Global Economies Continue to Rely on Coal for Baseload



13.6%

PAMC annual sales increase

## BUILDING PARTNERSHIPS WITH THE COMMUNITY

CONSOL constantly works to enhance the communities where we operate. To CONSOL, this means working in and with the community members and partners to find meaningful and measurable contributions for each community's unique needs. This community involvement can take several forms, such as identifying and addressing areas of local concern through charitable investments; volunteering in support of health, education, environment, safety, civic and social services, or disaster relief; or meeting with community members and leaders to determine ways in which CONSOL's operations are impacting the community and working with the communities to appropriately address any impacts. Regardless of the form, CONSOL operates proactively to be the best corporate citizen it can be.

### Stakeholder Engagement:

As a coal producer, we are aware that our activities impact a broad range of stakeholders. Building and maintaining relationships with these stakeholders is paramount to CONSOL and crucial to the success of our business. **CONSOL strives to build quality relationships with a diverse range of stakeholders by focusing on understanding their perspectives while communicating our operational strategy and performance.** CONSOL believes that a shared understanding is essential to building a cohesive vision for the future. Stakeholder engagement has a myriad of benefits to CONSOL, chief among those is its ability to bring people together to pool a diverse range of knowledge, experience, and expertise to co-create positive solutions for all involved.




| Stakeholder                            | Engagement  | Areas of Interest   | Frequency    |
|--|---|---|--------------|
| <b>Community members</b>               | Direct contact with our Land Department;<br>Public notices;<br>Public meetings;<br>ESG Committee Engagement<br>Social media               | Land management;<br>Environmental impacts;<br>Charitable giving;<br>Employment opportunities;<br>Post mining land use           | As needed    |
| <b>Employees</b>                       | Daily Pre-shift or "Ramp" Meetings<br>Quarterly Executive Management Update Meetings,<br>Intranet postings;<br>24-hour compliance hotline | Safety performance;<br>Safety training;<br>Wages and benefits;<br>Professional opportunities;<br>Company financial performance  | Continuous   |
| <b>Business Partners and Suppliers</b> | Scheduled safety meetings;<br>HSE reviews   | Project opportunities;<br>Safety performance;<br>Safety training;<br>Company financial performance                              | Continuous   |
| <b>Customers</b>                       | Communications through our marketing department   | Coal quality;<br>Coal pricing;<br>Logistics and transportation  | As needed    |
| <b>Capital Providers</b>               | Annual Stockholder Meeting;<br>Conferences;<br>Calls and Meetings;<br>ESG Committee Engagement  | Free cash flow generation;<br>Liquidity and debt;<br>Capital allocation process;<br>Organizational strategy;<br>ESG performance | Continuous   |
| <b>Elected Officials</b>               | Public meetings;<br>Political Action Committee;<br>ESG Committee Engagement   | Economic contribution;<br>Employment opportunities;<br>Land management;<br>Post mining land use                                 | Ongoing      |
| <b>Regulators</b>                      | Project planning and permit pre-application meetings;<br>Required regulatory reporting;<br>Routine compliance inspections                 | Regulatory compliance;<br>Operational permitting;<br>Land management  | Ongoing      |
| <b>Non-governmental organizations</b>  | Publicly available reports<br>In-person meetings  | Environmental impacts;<br>Environmental performance   | As requested |





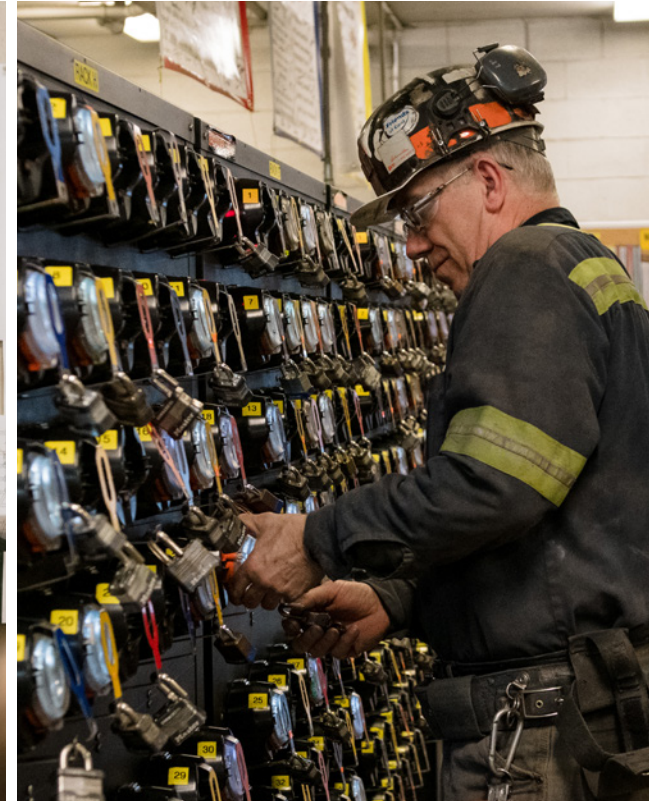
### CONSOL Cares Foundation

 We established the CONSOL CARES FOUNDATION in 2018 to focus our community giving while also bringing a wider variety of views to the table to lead the discussion on directing this community outreach. **We strive to enhance the health and safety of our communities, making them better places to live and prosper.** Under the Bylaws of the Foundation, the Foundation's Board is required to have various representative directors from divergent areas such as operations, accounting, and human resources. Additionally, a community representative director is a required Board seat to ensure input from those within the community where CONSOL operates.



### Center for Sustainable Business at the University of Pittsburgh

In 2019, CONSOL joined the Center for Sustainable Business (CSB) at University of Pittsburgh. The CSB will engage leading global and regional companies to integrate environmental and societal concerns into their business models. The CSB will work with companies managing the "triple bottom line" of people, planet, profits. The founders aspire to make the CSB a world-renowned hub for applied research on sustainable business. The CSB's mission is to help companies tackle the question of 'how' to best embed sustainability throughout the organization.



### Chevron Center for Corporate Responsibility at Waynesburg University

In 2018, CONSOL joined the Chevron Center for Corporate Social Responsibility at Waynesburg University, a first-of-its-kind center in the region. The center is intended to spearhead service projects to spur corporate volunteerism. The center hosts quarterly sessions for its members that include in-depth best practices discussions and work focused upon specific areas of content depending on the session.

## CULTURE OF SAFETY AND EXCELLENCE IN OPERATIONS

Our employees are CONSOL's most important stakeholder and our most valuable asset. Our highly technical and dedicated workforce is central to our sustainable operations. **We strive to attract, inspire, develop and retain top level talent.** Our performance depends on it. CONSOL seeks to create a work environment in which people are empowered, productive, contributing, and fulfilled. This is achieved through communication, training, engagement and employee feedback, empowerment, and a focus on employee health and wellness.

### KEY WORKFORCE STATISTICS

1,682

Full time male employees

73

Full time female employees

16

Part time male employees

1

Part time female employees

669

Contractors

67.4%

Non-represented hourly

1.6%

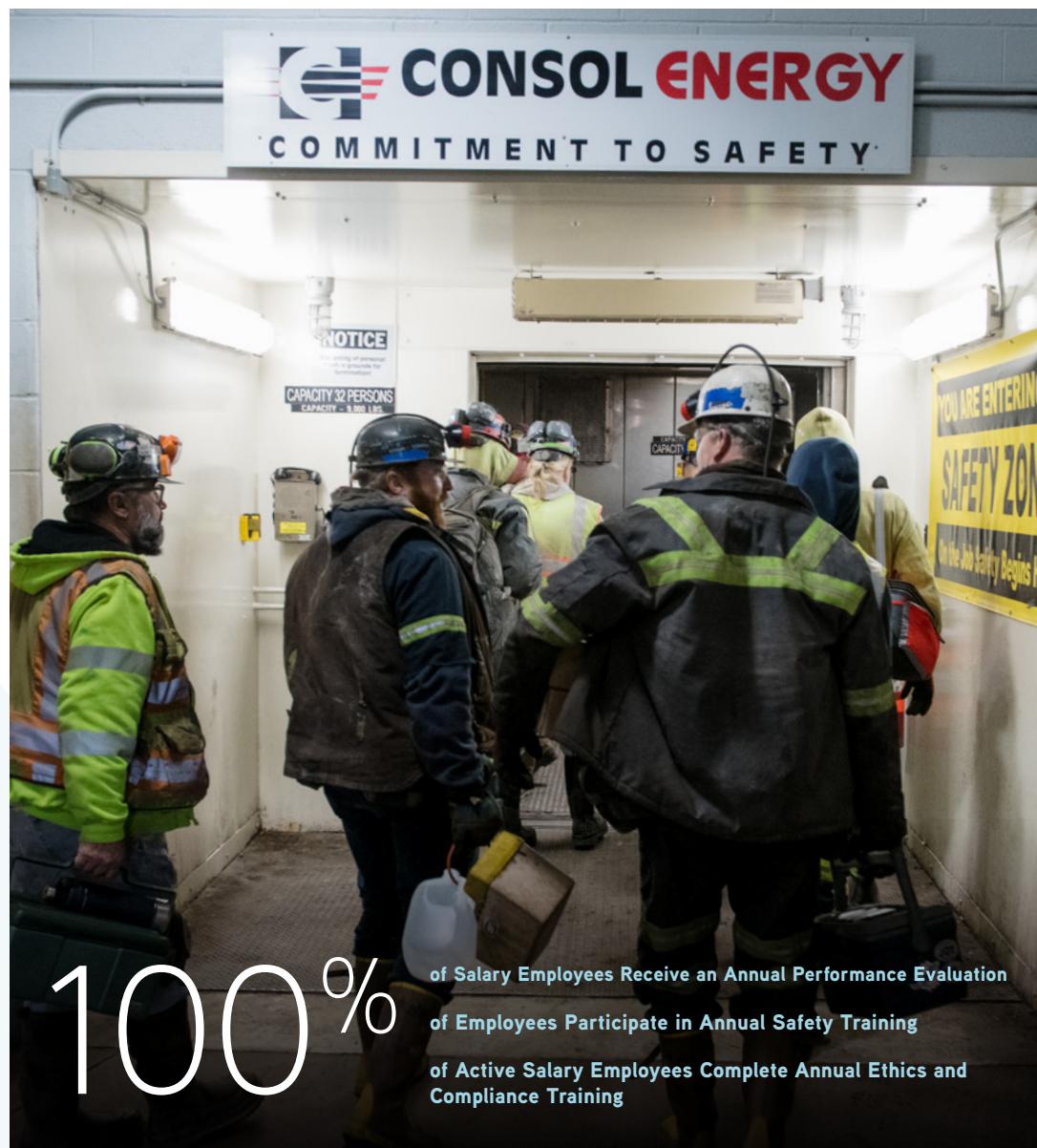
Represented hourly

31%

Salary

24

Women in management positions



100% of Salary Employees Receive an Annual Performance Evaluation  
 100% of Employees Participate in Annual Safety Training  
 100% of Active Salary Employees Complete Annual Ethics and Compliance Training

### Safety Management System:

CONSOL's safety management system applies equally to all employees, service partners, and visitors. The core principles of our program are empowerment, industrial health and wellness, and training. Our robust safety culture has tremendous benefits for the Company as well, with fewer lost time accidents directly translating to higher productivity and workforce continuity.

As a U.S. based company, we strive to conduct our operations in accordance with all applicable U.S. federal, state, and local laws. We do not employ any person under the age of 18, and we provide equal employment opportunities (EEO) to all employees and applicants for employment. We are dedicated to ensuring a harassment free workplace environment for all employees. For more information, please refer to our [EEO Policy Statement](#).



## EMPOWERMENT



We empower our employees to positively and safely influence their own actions, as well as the actions of their teammates. At our operations, anyone on location, regardless of position or employer, is empowered and expected to stop the normal course of operations if he or she believes that safety or compliance is being compromised. This empowerment is routinely emphasized during regular safety meetings. At CONSOL, we underscore communication, teamwork, and delivering effective feedback at all levels of the organization, with respect to all areas of responsibility. These tenets drive our widespread safety culture.



CONSOL's commitment to health, safety, and environment (HSE) is not limited to its employees. CONSOL has established minimum HSE standards that must be met by our service partners to be

eligible to perform work at any of our operations. We employ ISNetworld, a third-party HSE validation service, to assist in this capacity. We've also engaged TEAM Alert, an additional third-party administrator, to support our commitment to a safe, healthy, and productive work environment free from the adverse effects of drugs and alcohol. TEAM's full integration with ISNetworld certifies that all contractors comply with the Company's non-DOT drug and alcohol testing requirements.

## INDUSTRIAL HEALTH AND PERSONAL WELLNESS



The safety management program includes an industrial health component that is based upon monitoring and control of employee exposure. Our team is led by an in-house occupational and industrial health manager to identify risks and prioritize the need for field evaluation. Subsequently, best practices, protective measures, and Company policies related to employee protection and risk mitigation are developed as needed.

- 🎯 **We endeavor to provide our employees with a healthy work-life balance, and the opportunity to take an active part in managing their health.** CONSOL's Well-Being Program encourages employees to (1) complete a yearly comprehensive biometric screening and (2) participate in one-on-one wellness coaching sessions with a health coach professional. The comprehensive biometric screening is designed to help employees identify conditions that could be prevented through



early identification and treatment. Our wellness coaches work to build relationships and provide one-on-one support to all employees to help them identify and reach their unique goals for health and well-being.

- ▶ **In 2018, we made Forward Progress on our wellness initiative, as 84% of full-time employees participated in the biometric screening while 74% participated in the wellness coaching sessions.**

84%

**Participation in  
biometric screening**

74%

**Participation in  
wellness coaching**



## TRAINING

Training is perhaps the most critical component of our safety management system. Our robust training program is the catalyst for our exemplary safety performance. CONSOL's program is led by a team of experienced trainers with firsthand knowledge of our operations, our employees, and our contractors. All employees participate in an annual safety training program that incorporates a module related to environmental compliance. Although our training program integrates initial, new-hire training and regular refresher trainings mandated by regulation, the daily interaction surrounding safety throughout the Company truly differentiates CONSOL. This daily interaction is focused around proactive risk analysis, hazard recognition, documentation of safe work instructions (SWIs) and safe work practices (SWPs). In the event of a severe accident, an accident cause elimination (ACE) investigation is conducted to examine the root cause failures that led to the incident to better prevent reoccurrence.



### CONSOL's "Train to Mastery" Methods Recognized by NIOSH

We were recognized for our contribution to the National Institute for Occupational Safety and Health's (NIOSH) Self-Escape Competency Survey (Survey). The Survey was initiated to assess emergency response training and preparedness at U.S. underground coal mines, as required by the MINER Act of 2006 (Act). The Act requires an assessment of self-escape competency, and in 2013, the National Academy of Sciences urged the industry to adopt a "train to mastery" system with competency-based standards emphasizing Knowledge, Skills, and Abilities (KSA's), as opposed to solely fulfilling time-based training requirements.

While NIOSH previously identified KSA's through administration of a comprehensive Self-Escape Competency Survey, the agency further sought to determine how coal mines can use the critical KSA's to further improve miners' self-escape competencies.

CONSOL's training and safety team volunteered to support NIOSH's efforts, as we sought to understand what gaps in critical self-escape knowledge remained at our coal mines, despite the Company's past training efforts. We developed a competency based assessment tool that was employed during our annual refresher training. This tool provided our trainers with direct feedback from our workforce on what types of training and exercises would be most beneficial.

Through this process, we identified mine map symbol and lifeline symbol knowledge, what to expect when wearing a Self Contained Self Rescuer (SCSR), how to enter the mine's refuge alternative, and how to fight

fires as opportunities for enhanced training. Accordingly, our training and safety teams incorporated these elements into the annual smoke/SCSR expectations training. We also developed a supplemental firefighting refresher to be delivered as part of the annual refresher course.

To ensure our employees were provided with actual experiences to improve their self-competency, our trainers gathered live SCSR units in need of refurbishment, and offered mineworkers the realistic experience of opening, donning, and wearing a real SCSR—in a smoke filled, simulated mine constructed at CONSOL's training center. The firefighting portion of the program included training on the operation and set up of diesel powered fire cars, set up and use of the Company's foam packs and portable foam generators, and firefighting using fire hoses in the Company's fire gallery.

**Since implementing the enhanced, hands on training experience sought by our miners, we have seen a marked improvement in workforce KSA and an increase in overall engagement and enthusiastic participation in health and safety training.**

CONSOL's participation in the NIOSH Survey and related development of an enhanced, hands on training program exemplifies our culture of safety and continuous improvement. We are proud that our "Improving Self-escape From Underground Coal Mines Training Initiative" was recognized as a Bullard-Sherwood Research to Practice Finalist, in NIOSH's 2019 Science Award Program.

## SAFETY PERFORMANCE

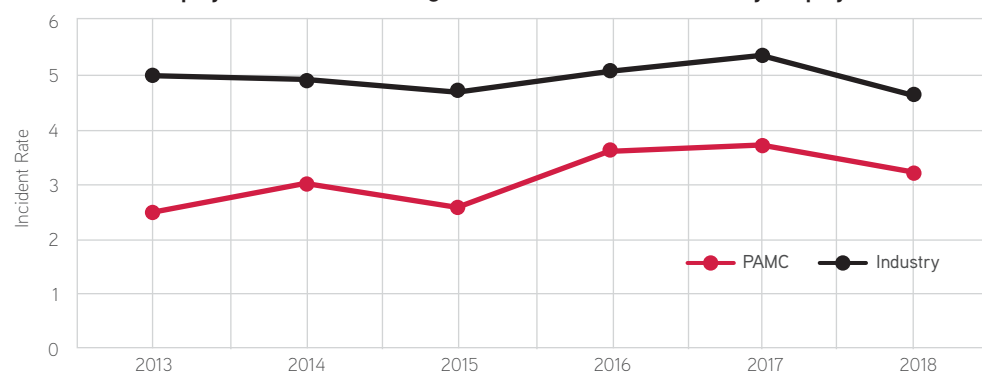
CONSOL's Absolute Zero value system is based on the premise that ZERO accidents is normal, and that any accident is uncharacteristic and inconsistent with our values. **Simply put, safety is at the core of everything we do, and Absolute ZERO remains our greatest goal. CONSOL is committed to achieving best-in-class safety and compliance results in the industry, while continuously improving our own performance, year over year.** In 2018, we made strides toward achieving these goals:

- Safety Incident Rate 31% lower than the Mine Safety Health Administration (MSHA) national average
- Reduced TRIR at PAMC by 13.5%, compared to 2017
- Reduced Total Number of Exceptions by 12.1%, compared to 2017

### 2018 Performance

| Indicator   | Pennsylvania Mining Complex | Baltimore Marine Terminal | Legacy Operations |
|---|-----------------------------|---------------------------|-------------------|
| Employee Total Recordable Injury Frequency Rate   | 3.2                         | 0                         | 0                 |
| Contractor Total Recordable Injury Frequency Rate | 2.6                         | 0                         | 3.4               |
| Employee Work related fatalities                  | 0                           | 0                         | 0                 |
| Contractor Work-related fatalities                | 0                           | 0                         | 0                 |
| Total Regulatory Violations (MSHA or OSHA)        | 1134                        | 0                         | 0                 |
| Violations per Inspector Shift                    | 0.47                        | 0                         | 0                 |
| Orders  | 4                           | 0                         | 0                 |

**Total Recordable Incident Rate:  
PAMC Employees vs MSHA Underground Bituminous Coal Industry Employees**



% Below Industry

51% 39% 46% 30% 31% 31%

### CONSOL Receives NMA's CORE-Safety® Certification:

In October 2019, the National Mining Association (NMA) recognized CONSOL for becoming certified under its CORESafety® initiative. CONSOL is the 10th mining company to be fully certified utilizing the framework, which aims for zero fatalities and a 50 percent reduction in rate of injuries within five years. Certification is a multi-step, multi-year process. CORESafety's approach to safety and health emphasizes accident prevention and uses a risk-based management system anchored in leadership, management and assurance. The framework is designed to go beyond what is required by regulations, focusing on a goal of continuous improvement which aligns with CONSOL's core value of continuous improvement. CORESafety® participants agree to: commit to the CORESafety system; implement a functionally-equivalent version of the CORESafety safety and health management system; submit to NMA annual self-assessments of progress toward implementation of the CORESafety safety and health management system; and, if the company elects to become or maintain CORESafety certification, complete a thorough third-party assessment of its safety and health management system to verify that it is functionally equivalent to CORESafety and submit the assessment report to NMA.

**CORESAFETY**

### CONSOL Excels at 2019 National Mine Rescue Competition:

MSHA hosts a bi-annual National Mine Rescue Contest, to sharpen skills and test the knowledge of team members who would be called on to respond to a mine emergency. The competition is designed to simulate a mine emergency. It requires team members to solve designed problems while being timed and observed by judges according to complex rules. In 2019, the CONSOL Bailey Blue Team took home 1st place and its members were crowned the 2019 National Mine Rescue Champions. CONSOL's Harvey Blue Team placed 3rd in the competition. Out of 52 teams competing from across the nation, CONSOL sent six total teams. CONSOL's four remaining teams placed as follows: Enlow Red Team 10th place; Harvey Grey Team 22nd place; Bailey White Team 32nd place; and Enlow Blue Team 36th place. In addition, Harvey Mine's John Helmick finished 2nd in the Bench Competition. CONSOL is extremely proud of its mine rescue teams—the preparedness, dedication, and teamwork of our teams, trainers, and support staff exemplifies the Company's commitment to safety.





2

SUSTAINABILITY IN THE COAL LIFECYCLE:

# EXTRACTION

CONSERVATIONISTS  
COMMITTED TO  
SUSTAINABILITY



“Sustainable Development” is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. For future generations, CONSOL is focused on minimizing our environmental impacts through maximizing water reuse, reducing process air emissions and restoring mine properties.

- 🎯 We strive to achieve sustainability in the extraction or mining phase of the coal life cycle. Our Environmental Policy Statement shapes our alignment with the well-known mitigation hierarchy—that is, we strive to avoid, minimize, and mitigate our impacts during operations, while maintaining an exceptional environmental performance record. Once mining is complete, we endeavor to return the land for ecological, communal, or economic benefit.



Read more at  
[consolenergy.com/sustainability](https://consolenergy.com/sustainability)



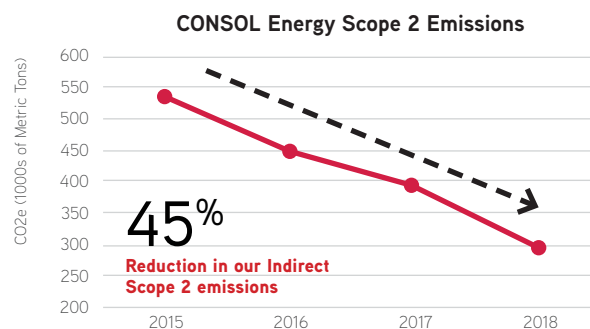
## INNOVATION DRIVES FURTHER AIR QUALITY IMPROVEMENTS

From an air quality perspective, our goal is to achieve 100% compliance with our air quality operating permits while deploying technology to reduce our emissions. Our technology goal guided our partnership with Environmental Commodities Corporation (ECC) to develop and deploy mine methane abatement technology on degasification extraction systems on degasification extraction systems, which remove methane from the mine to support a safe working environment underground. The project provides the direct benefit of a voluntary reduction in our scope 1 emissions, while providing an opportunity to generate carbon credit offsets that can be made available for sale under California's cap-and-trade program.

The emission reduction systems were successfully piloted at two different facilities in 2017 and achieved full scale operation in 2018. As a result of this success, we worked with ECC to expand the project by deploying four additional methane abatement systems in 2019. The initial expansion has markedly increased our emissions reduction. To date, the project has resulted in an emissions reduction of more than 200,000 metric tons of CO<sub>2</sub>e. This reduction represents approximately 8-10%

of the mine's average annual scope 1 emissions. In 2018, our direct emissions intensity, as measured on a metric ton CO<sub>2</sub>e per Btu of coal produced, improved by 2%. This improvement was influenced by our methane destruction technology initiative. We intend to continue to expand our program in 2020, for further improvements.

In addition, we continue to employ EnelX's Energy Intelligence Software to provide us with real time energy use, demand, and cost data. This software also helps facilitate our participation in a demand-response program, in which we volunteer to curtail our electricity usage during times of increased load. The software has contributed to a 45% reduction in our indirect Scope 2 emissions, compared to 2015 levels.

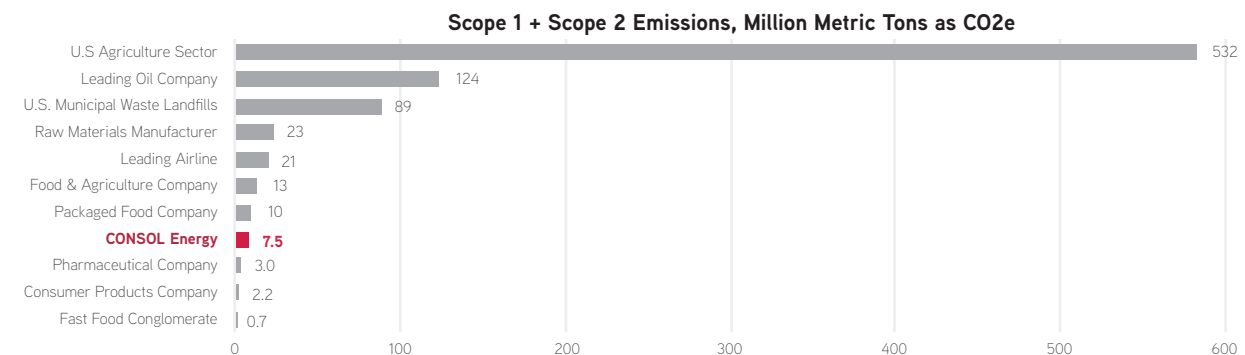
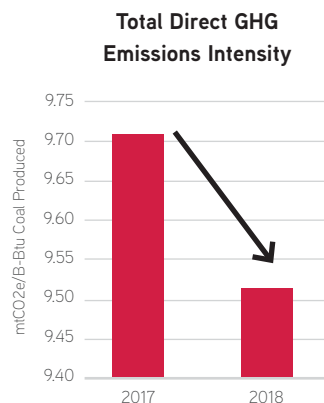


In addition to those emissions regulated by our air quality permits, we are also required to report the direct scope 1 emissions from our operations on an annual basis under the USEPA's mandatory greenhouse gas reporting rule (MRR). We've expanded our annual inventory to include an assessment of our indirect scope 2 and scope 3 emissions as well. A detailed assessment of our emissions is available in our annual CDP disclosure.

| Criteria Pollutants (short tons)      | 2018 |
|---------------------------------------|------|
| Volatile Organic Compounds            | 203  |
| PM10                                  | 73   |
| PM2.5                                 | 23   |
| Carbon Monoxide                       | <1   |
| Nitrogen Oxides                       | <1   |
| SO <sub>2</sub>                       | <1   |
| Total Hazardous Air Pollutants (HAPs) | <1   |

| GHG Emissions (1000s of metric tons CO <sub>2</sub> e)   | 2018   |
|--|--------|
| Total Direct GHG Emissions (Scope 1)   | 7,222  |
| Total Indirect GHG Emissions (Scope 2)   | 292    |
| Total GHG Emissions Attributable to CONSOL Energy  | 7,515  |
| Total Direct GHG Intensity (metric tons CO <sub>2</sub> eq/ metric tons CO <sub>2</sub> e/B-Btu Coal Produced) | 9.51   |
| Total Other Indirect GHG Emissions (Scope 3)   | 68,074 |

Scope 1 and scope 2 emissions are not unique to the energy production or generation industries—emissions result from everyday activities such as driving a car, heating your home, turning on your lights, or disposing of your garbage. CONSOL's scope 1 and scope 2 emissions align with those generated by other U.S. coal companies of similar size and operations. Additionally, CONSOL's emissions footprint is consistent with many other large companies outside of the coal sector, as shown below.

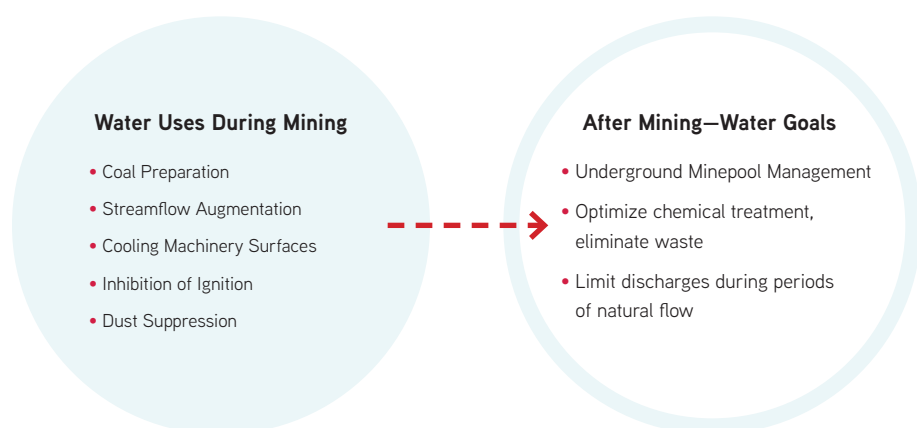


Source: CDP responses, EPA FLIGHT

## IMPROVING TRENDS IN WATER MANAGEMENT AND RECYCLING

Like our overall environmental management approach, we strive to reduce our reliance on local water resources—even though our operations in the Northern Appalachian Basin have little exposure to water scarcity

risk. Our sustainability goals are focused on 3 key areas of water resource conservation: (1) reduce withdrawals to protect local water resources, (2) maximize the recycling of process water for use in operations and (3) reduce the volume of wastewater treated and discharged through effective minepool management. We continue to perform against all 3 water related sustainability goals.



To minimize our impact to local water resources, we limit discharges during periods of low flow to the extent possible, and we preferentially utilize recycled or treated water within our operations. This management approach limits our reliance on surface and public water supplies that serve as ecological habitats, recreational waters, or potable drinking water sources. Although our total water withdrawal volume increased by 11% in 2018, compared to 2017

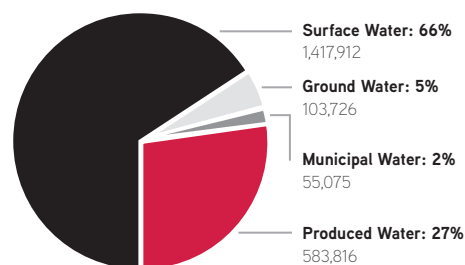
levels, our overall volume of water withdrawals has decreased by 42%, compared to 2016 levels.

The 2018 increase was primarily related to record setting coal production at PAMC, which increased water demand. Although surface water continues to

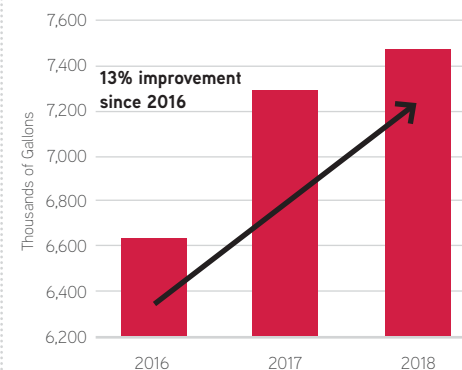
be our largest withdrawal source, these withdrawals do not constitute more than 5% of the annual average volume of any source waterbody. Throughout the year, no waterbodies or sources were significantly affected by our use, as determined by the source size, function, or status as a rare, threatened, or endangered system. The increase in water withdrawal volumes during the year was offset by an improvement in the total volume of water recycled at

PAMC. Since 2016, the total volume of water recycled has improved by 13%, marking consistent achievement of our sustainability goal.

**PAMC Water Withdrawal by Source, 2018 1000s of Gallons**

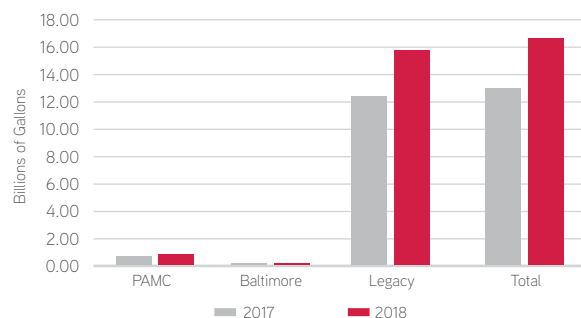


**Total Volume Recycled**



As part of our efforts to improve water quality and protect aquatic habitats, CONSOL continues to operate many of its legacy mine water treatment facilities through a managed discharge approach. This approach allows us to limit discharges during times of low flow, and allows us to reduce the volume of wastewater treated and discharged from our mines, in accordance with our sustainability goal. We've completed a series of hydrogeological studies at our legacy mines to refine our mine pool management strategies. As a result of these studies, the volume of wastewater discharged from these legacy underground mine pools has decreased by 73%. For a detailed inventory of our water management approach, accounting, and performance, please see our [CDP](#) disclosure.

**Volume of Water Treated and Discharged, 2017 vs 2018**



>16B

Gallons of water treated

## RESTORING MINE LAND

CONSOL's commitment to the mitigation hierarchy is evident throughout the mine project cycle – from facility design to reclamation. Before mining commences, we complete an extensive permitting process that includes an in-depth assessment of potential impacts to environmental, cultural, and historical resources. The Company's [Biodiversity Policy](#) describes our approach to minimizing our impacts to critical habitats, species, and natural resources. Where possible, we strive to design our facilities in a manner that avoids or limit our impacts to these resources. Where impacts are unavoidable, we pursue mitigation projects including, but not limited to, targeted revegetation, stream or wetland creation, enhancement, restoration, or preservation activities at an off-site location.

In advance of mining, we also actively identify and plug abandoned gas wells located within the footprint of mine plans. This work is completed to promote a safe environment underground. Many of the gas wells we plug are legacy wells – some of which have been previously abandoned, creating an environmental liability for the state regulatory agencies and the community. Our well plugging program mitigates this risk. In 2018, we plugged 30 abandoned gas wells.

During operations, we strive to minimize surface disturbance and to practice contemporaneous reclamation to the greatest possible extent. As our mining operations at PAMC are underground, surface disturbance associated is minimal. Our largest disturbance is associated with our coal refuse disposal areas, where we are currently deploying technology that may limit this disturbance in the future.

After mining is complete, our goal is to restore the land for effective use as an environmental or economic resource. We've introduced a new metric, the reclamation to disturbance ratio, to allow us to measure our progress on an annual basis. We continue to restore more than 2 acres for every 1 acre disturbed.

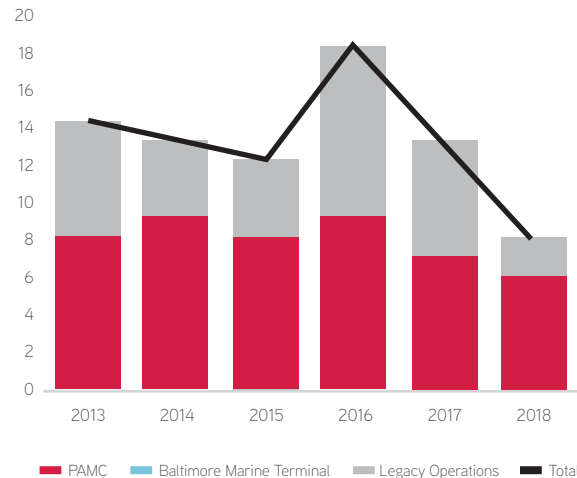
2.18 ..... **2018 Reclamation to Disturbance Ratio**  
 3,300 ..... **Acres Revegetated**  
 600,000 ..... **Trees Planted**  
 30 ..... **Abandoned Gas Wells Plugged and Remediated**

## ENVIRONMENTAL MANAGEMENT SYSTEM

Our Environmental Management System (EMS) was designed to follow the ISO 14001 standard. The EMS provides a framework for the way we manage environmental compliance and strive for environmental continuous improvement. **Our sustainability goal is to maintain a 99.9% compliance record, and in 2018, we achieved this record for the 6th consecutive year.**

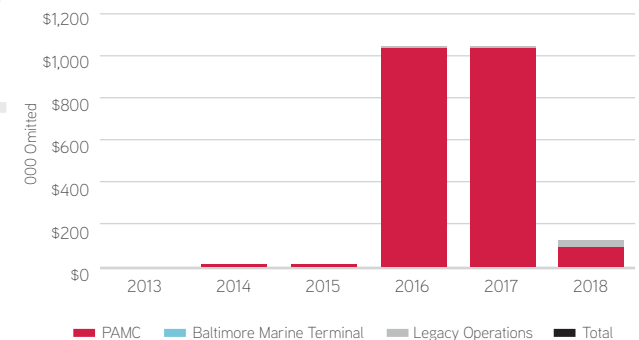
In addition, we reported the fewest number of agency issued violations since tracking of this metric began in 2013. Our 2018 compliance performance marks a 38% improvement compared to 2017. This performance is noteworthy, considering that in 2018, we treated and discharged a record setting 16.7 billion gallons of water due to abnormally high precipitation that occurred throughout the year. No significant, off containment spills of hydrocarbon material were reported throughout the year.

Agency Issued Notices of Violation, 2013–2018



We utilize monetary penalties as an indicator to assess our overall compliance performance and the severity of our violations. In 2018, the Company paid a total of \$125,000, approximately 67% of which were associated with legacy consent orders for which termination is currently pending. The remaining 33% was associated with 8 agency issued notices of violation, which were rated minor in severity and mitigated immediately.

CONSOL Energy Environmental Penalty Payments



99.9% **Compliance Rate for the 6th Consecutive Year**

38% **Improvement in Agency Issued Violations, Year over Year**



3

SUSTAINABILITY IN THE COAL LIFECYCLE:

# PROCESSING

## MINIMIZING OUR PHYSICAL FOOTPRINT WHILE PRODUCING CLEANER FUEL

During coal cleaning or preparation processes, our operations produce waste, primarily coal refuse material or other waste rock consisting of coal, clay, and other non-hazardous organic and inorganic matter. As is common in many mining applications, fine coal refuse is separated from coarse coal refuse during coal preparation, and is disposed of in “slurry impoundments” or dams constructed within natural topography in accordance with strict safety and environmental regulatory standards related to structural stability and environmental resources. The design, construction, operation, and maintenance of our impoundments is regulated by the U.S. Mine Safety and Health Administration (MSHA) as well as state agencies responsible for oversight of coal mining activities and dam safety. Consistent with CONSOL’s overall management approach, we operate our impoundments to protect our workforce, the surrounding communities, and the environment, while **we implement our sustainability goal of pursuing innovative technologies to reduce our physical footprint and mitigate risk.**



## TAILINGS DAM RISK MANAGEMENT

At the Pennsylvania Mining Complex (PAMC), CONSOL currently has two active slurry impoundments and one inactive slurry impoundment. In addition, CONSOL manages two inactive, legacy slurry impoundments – one in Pennsylvania in one in Ohio. CONSOL's inactive impoundments are in various stages of reclamation.

A slurry impoundment failure could create significant impacts, including the loss of life or material impacts to the community, physical property, and the environment. To mitigate this risk, we employ a multi-faceted management approach that aligns with regulatory standards:

### Monitoring and Measurement

In accordance with permit requirements, we employ monitoring devices such as piezometers and inclinometers that allow us to detect changes in the impoundments that would suggest stability has been compromised. We also track the changes in topography of our active facilities with quarterly aerial surveys.

### Routine Inspections

Qualified personnel who have demonstrated competency through completion of MSHA training requirements conduct routine inspections of our slurry impoundments, at a frequency predetermined by the facility's hazard classification. CONSOL's safety program empowers our employees,

contractors, and visitors to stop operations if they believe safety is being compromised, and this empowerment extends to our impoundment inspectors. Impoundment inspectors have the authority to initiate emergency response protocols in the event abnormal conditions are observed.

### Independent Certifications

As required by regulation, at least annually, a fully licensed professional engineer conducts an independent inspection of our slurry impoundments and is responsible for certifying that the impoundment is maintained in accordance with the documents and designs submitted to the appropriate regulatory authority, and that adverse conditions that could affect stability have not been observed. The authority to initiate emergency response protocols extends to these licensed inspectors.

### Regulatory Oversight

In addition to routine and annual inspections, our impoundments are regularly inspected by representatives from MSHA and state specific agencies responsible for regulating impoundments.

### Emergency Preparedness

At our operations, we maintain Emergency Response Plans (ERP) that identify specific actions to be taken by Company personnel and emergency officials in the event of an emergency. We update our ERPs and conduct emergency response drills at least annually. In addition, where required by regulation, we maintain supplemental Emergency Action Plans (EAP) specific to our high hazard impoundments. These plans are regularly reviewed and endorsed by the regulatory authorities and the local emergency management agencies, as appropriate. Each EAP identifies protocols to be followed in the event abnormal conditions are observed, ranging from surveillance to evacuation. The EAPs include inundation mapping delineating the probable area of impact in the event of a failure.

As we are committed to transparency, we will disclose our performance related to our impoundment management approach, as well as any incidents occurring at CONSOL's slurry impoundments that trigger emergency response protocols. **In 2018, we completed 100% of routine inspections, and 100% of independent certifications as required for all five slurry impoundments. Additionally, we did not experience any events that warranted activation of emergency response protocols.**



### Reducing Our Footprint with OMNIS

Partnering with OMNIS Bailey, LLC (OMNIS), CONSOL is seeking to reduce or eliminate the need for disposing of fine coal refuse in surface impoundments by building a first-of-a-kind solid energy refinery that converts waste coal into two marketable products: (1) high-quality solid fuel product, and (2) mineral product for use as a soil amendment in agricultural applications.

In 2017, a pilot plant was constructed at PAMC for process optimization and commercial testing. **OMNIS made Forward Progress, and construction on the first 25 ton-per-hour production module near CONSOL's Central Preparation Plant is underway.** This initial commercial-scale facility is expected to be commissioned sometime in 2020. Once operational, the module will be capable of producing up to 25 tons per hour of solid fuel product derived from waste coal. At full capacity, the plant is envisioned to ultimately include eight modules producing as much as 200 tons per hour of refined cleaner-burning solid energy product from waste coal.

If commercial-scale operations become successful, the possibility of reducing or eliminating slurry impoundments could be a game changer for CONSOL and the entire coal industry. In short, the OMNIS project is designed to turn a waste stream into a revenue stream while reducing the environmental footprint of the mining complex.





4

SUSTAINABILITY IN THE COAL LIFECYCLE:

# TRANSPORTATION

## CONSOL MARINE TERMINAL PROVIDES STRATEGIC ACCESS TO THE EXPORT MARKET AND EXEMPLIFIES CONSOL'S ESG MANAGEMENT APPROACH

Our CONSOL Marine Terminal (CMT), located on 195 acres in the Port of Baltimore, provides CONSOL access to the seaborne markets for exporting thermal and metallurgical coal. The terminal has a throughput capacity of approximately 15 million tons per year and a coal storage yard with capacity for 1.1 million tons. CMT is the only coal marine terminal on the East Coast to be served by two Class I railroads—Norfolk Southern and CSX Transportation. In 2018, CONSOL transloaded 12.4 million tons of PAMC and third-party coal at the CONSOL Marine Terminal for shipment to destinations throughout the world, while making Forward Progress with record setting revenue of approximately \$65 million.





Revenue and throughput volumes are not the only records held by our CMT team – who complemented their operational performance with exceptional safety and compliance records. **CMT Employees have been “At Zero” with respect to safety exceptions for 5 consecutive years.** This record could not have been achieved without the inherent culture of safety, teamwork, and communication embodied by the CMT team.

This culture duly extends to the CMT’s approach for environmental management. **CMT has not received an environmental violation since the Company began tracking this metric in 2013.** To further expand upon the Company’s sustainability goal of reducing water withdrawals, CMT established a sustainable water recycling program with the goal of minimizing the use of municipal water for dust suppression and equipment washing. Since 2015, the Terminal has recycled a total of 6.3 million gallons of water. In 2018, these recycling efforts prevented the discharge of over 1.4 million gallons of wastewater. The total volume of municipal water utilized at CMT in 2018 decreased by 45%, compared to 2017 levels.

Additionally, CMT’s environmental permit sets an annual 20% nutrient reduction target, as measured by loads of Nitrogen and Phosphorous discharged. When coupled with prior tree planting activities and on-going street sweeping operations, the CMT water management system facilitated a decrease total nitrogen (TN) and total phosphorus (TP) loads, achieving nutrient reductions of 32.9% and 30.6%, respectively in 2018.

CMT will continue to provide strategic access to the export market, playing a crucial role in CONSOL’s efforts to achieve sustainability throughout the coal lifecycle.

## BECOMING A BETTERCOAL SUPPLIER

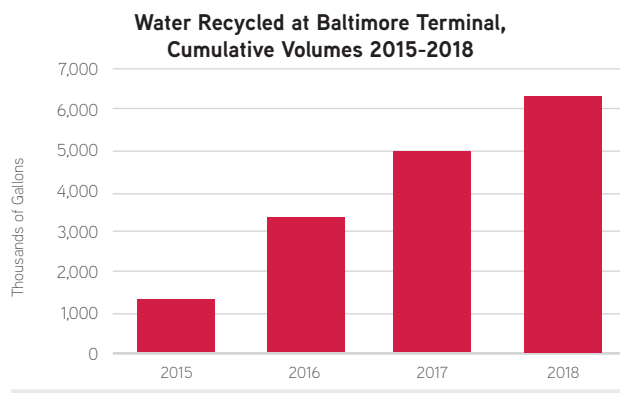
In 2018, CONSOL exported 8 million tons of PAMC coal (or approximately 29% of our annual sales volume) to seaborne coal markets through CMT. In 2019, CONSOL committed to become a Bettercoal Supplier to demonstrate its sustainability commitment as a coal miner and exporter.

Bettercoal is a global organization that seeks to advance environmental, social and ethical practices and continuous improvement in the coal supply chain. It was established by a group of major coal buyers to promote the continuous improvement of sustainability performance in their coal supply chain. Bettercoal’s values align with CONSOL’s ESG approach, and include: (1) continuous improvement; (2) transparency; (3) stakeholder engagement; and (4) a risk management.

In 2019, we participated in an independent assessment of all active operations (including all three mines at CONSOL’s PAMC the Central Preparation Plant, Corporate Headquarters, and its CONSOL Marine Terminal) against the Bettercoal Code, conducted by third party auditors. The Bettercoal Code is an internationally recognized standard of ethical, social, and environmental operating principles for the coal mining industry that aligns with international best practices such as UN Principles, International Labor Organization Standards, and the Extractives Industry Transparency Initiative.

In 2020, CONSOL will work with Bettercoal to develop and implement a Continuous Improvement Plan (CIP) as part of its commitment to be a Bettercoal Supplier.

***CONSOL became the first U.S. coal producer to have all of its active operations participate in the Bettercoal independent assessment process.***



5

SUSTAINABILITY IN THE COAL LIFECYCLE:

# UTILIZATION

**SUPERIOR PRODUCT QUALITY  
CREATES OPPORTUNITIES FOR  
EMISSIONS REDUCTION AND  
ALTERNATIVE USES OF COAL**



According to the International Energy Agency (IEA), while coal consumption in the most economically developed countries may be falling, demand for coal in growing economies such as India and Asia is on the rise.<sup>1</sup> At the same time, IEA has developed multiple scenarios to reflect the world energy mix required to achieve aggressive emissions goals by 2040.<sup>2</sup> There is much uncertainty and debate surround-

ing the accuracy and feasibility of the IEA's current policy, new policy, and sustainable development policy scenarios. However, regardless of which scenario is being considered, coal continues to supply a portion of the energy needed to meet the world's energy demand.

We believe that innovation and technological advancements are crucial to achieve economic growth, expand access to energy, and achieve environmental goals. **We've outlined supporting the development of innovative coal technologies throughout the coal lifecycle as a sustainability goal.** Accordingly, we prioritize research related to environmental control technologies, efficiency projects, and alternative end uses of coal.



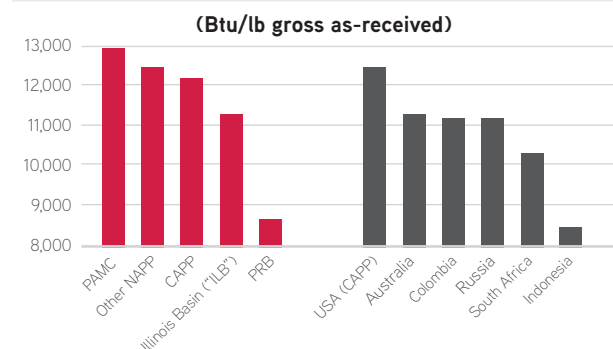
(1) S&P Global Market Intelligence (2019)

(2) IEA (2018), World Energy Outlook 2018, OECD/IEA, Paris, pg. 91

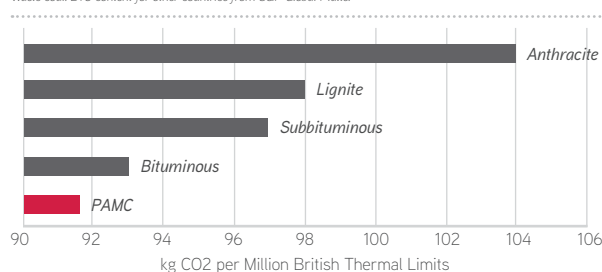
## CONSOL'S SUPERIOR PRODUCT QUALITY CREATES OPPORTUNITY FOR PAMC

The coal we produce at the Bailey, Enlow Fork, and Harvey mines has both a competitive cost structure and a superior quality relative to other coals. The characteristics of coal including the amounts of carbon, hydrogen, oxygen, and sulfur—directly affect the Btu content, or amount of heat generated during its combustion. These coal characteristics ultimately determine the emissions intensity of the coal. **The high BTU content of the coal produced at PAMC results in a lower carbon intensity, when compared to other coal ranks.**

The lower carbon intensity of PAMC creates opportunities for our coal to be utilized in low heat rate, environmentally controlled, and well-capitalized electric generating facilities – such as those higher efficiency units promoted by the U.S. EPA's Affordable Clean Energy (ACE) rule. In addition, these quality characteristics result in versatile prospects for non-combustion uses of our coal.



CONSOL Energy Inc. Management, ABB Velocity Suite, EIA, and S&P Global Platts. Other NAPP, CAPP, ILB and PRB represent the average of power plant deliveries for the three years ending 12/31/2018 per EIA / ABB Velocity Suite. Excludes waste coal. BTU content for other countries from S&P Global Platts.



CONSOL Energy Inc. management, EIA, carbon dioxide coefficients, 2017.

## DEVELOPING THE COAL PLANT OF THE FUTURE

The U.S. Department of Energy's (DOE) Coal FIRST (Flexible, Innovative, Resilient, Small, Transformative) initiative aims to develop coal plants of the future with high overall efficiency and near-zero emissions. These plants would be smaller than many of today's conventional utility-scale coal fired plants, but would be designed to maximize the benefits of high-quality, low-cost shop fabrication to minimize field construction costs and project cycle times. For near-zero emissions, plants would be based on designs that emit no or low amounts of CO<sub>2</sub> (amounts lower than natural gas technologies) or could be retrofitted with carbon capture without significant plant modifications.

▶ **As Forward Progress toward our technology goals, in April 2019, CONSOL's project was 1 of 13 selected to receive approximately \$150,000 under Coal FIRST to provide a base conceptual design for a coal-fueled power plant of the future. In October 2019, CONSOL's conceptual design was 1 of 7 selected to receive approximately \$1 million to proceed with a preliminary front-end engineering and design (pre-FEED) study.**

CONSOL's project is focused on designing a coal-fueled power plant based on advanced pressurized fluidized bed combustion technology, and is being conducted by a team that also includes Worley Group, Inc. and Farnham & Pfile Engineering, Inc. **The project supports the conceptual design of a novel coal-fired power generation cycle utilizing a pressurized fluidized bed combustor and supercritical steam cycle with CO<sub>2</sub> capture via a state of the art solvent based process.** The power cycle will aim to achieve greater than 40 percent efficiency (in carbon capture ready mode) as well as the ability to operate flexibly and accept a broad range of coal qualities (including waste coals).

This project will build upon the team's previous efforts by producing a plant design that is consistent with DOE's common design basis and optimized to meet the needs of today's power markets, including efficiency (both in CO<sub>2</sub> capture-ready configuration and with CO<sub>2</sub> capture installed), ramp rate, cold/warm start time, turndown ratio, air emission rates, and solid and liquid disposal requirements.

## ALTERNATIVE END USES AND ADVANCED MATERIALS FROM COAL

We also believe that an expanding opportunity for coal exists as a feedstock that can be more productively used beyond its conventional applications as a combustion fuel or in the production of steel. We are examining pathways to markets for coal-derived products.

### CFOAM®:

CONSOL recently acquired at 25% ownership stake in CFOAM, a company that produces high-performance carbon foam that can be used as an alternative to conventional materials in markets such as composite tooling, thermal insulation, and fire proofing, due to its excellent mechanical and thermal properties. CFOAM focuses on meeting demand for high-grade carbon material products in the aerospace, military, industrial, and commercial product markets.

### Coal Plastics Composites:

CONSOL is partnering with a team led by Ohio University aiming to develop engineered composite decking boards from coal. The utilization of coal in the manufacture of construction composite building materials requires less energy—resulting in lower manufacturing costs and emissions—than manufacturing commercial wood plastic composites. The initiative has the potential to open an alternative, sustainable market for U.S. coal. Studies show the global plastic composite market, which is undergoing tremendous growth, is expected to reach over \$8 billion by 2023. If successful, coal plastic composite manufacturing could generate an initial new U.S. coal demand market of over 3 million tons annually, along with new manufacturing jobs.



**CONSOL ENERGY**

# LOOKING FORWARD

Shortly after becoming an independent Company in November 2017, we outlined sustainability goals that complement our core values and strategic priorities. We continue to make Forward Progress toward achieving those goals as we simultaneously identified opportunities for continuous improvement. The CONSOL Energy team is focused on strong execution of our base operational, marketing, financial, and sustainability strategies. **Our performance will continue to drive long term value as we strive to safely and compliantly produce an affordable, reliable source of energy through innovative technology and perseverance.** CONSOL Energy's performance aligns with our Mission and exemplifies our organization's unrelenting dedication to responsible operations.

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# GRI INDEX

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## Point of Contact

For any questions regarding this report, please contact:

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## Forward-Looking Statements

Our 2019 Corporate Sustainability Report includes forward-looking statements about the Company's business and the Company's future business plans, initiatives, goals, and objectives. These forward-looking statements are based on concurrently available operating, financial, and competitive information and are subject to several significant risks and uncertainties. When we use the words "believe," "intend," "expect," "may," "should," "anticipate," "could," "estimate," "plan," "predict," or "project," or their negatives, or other similar expressions, the statements which include those words are usually forward-looking statements. When we describe a strategy that involves risks or uncertainties, we are making forward-looking statements. Actual future results may differ materially depending on a variety of factors including, but not limited to, the risks detailed in the Company's filings with the Securities and Exchange Commission, including the "Risk Factors" section of CONSOL Energy's Annual Report on Form 10-K for the fiscal year ended December 31, 2019. Any forward-looking statements in the Corporate Sustainability Report speak only as the date of the Corporate Sustainability Report and the Company assumes no obligation to update any of these forward looking statements.





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